

## EAST SEARCH HISTORY

HITS	QUERY	DATABASE					
	2 20020176609.pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB					
829	((face or facial or head) adj1 (detection or tracking or recogn\$6 or identifi\$6 or discrimin\$6 or determin\$6)).ti.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB					
67	((face or facial or head) adj1 (detection or tracking or recogn\$6 or identifi\$6 or discrimin\$6 or determin\$6)).ti. and 382.clas.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB					
13143	((face or facial or head) adj1 (detection or tracking or recogn\$6 or identifi\$6 or discrimin\$6 or determin\$6))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB					
512	((face or facial or head) adj1 (detection or tracking or recogn\$6 or identifi\$6 or discrimin\$6 or determin\$6)) and 382.clas. and @ad<20010525	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB					
1541	((face or facial or head) near3 (detect\$6 or track\$6 or recogn\$6 or identifi\$6 or discrimin\$6 or determin\$6)) and 382.clas. and @ad<20010525	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB					
8422	(skin or flesh or human) near (color or colour or tone or chrom\$6 or shade or hue or tint) same (region or section or partition or segment or part or area)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB					

138 (((face or facial or head) near3 (detect\$6 or track\$6 or recogn\$6 or identifi\$6 or discrimin\$6 or determin\$6)) and 382.clas. and @ad<20010525) and ((skin or flesh or human) near (color or colour or tone or chrom\$6 or shade or hue or tint) same (region or section or partition or segment or part or area))	USPAT. US-PGPUB; EPO. JPO. DERWENT; IBM_TDB					
2943 ((face or facial or head) with (locat\$6 or detect\$6 or track\$6 or recogn\$6 or identifi\$6 or discrimin\$6 or determin\$6)) and 382.clas. and @ad<20010525	USPAT. US-PGPUB; EPO. JPO. DERWENT; IBM_TDB					
1915 ((face or facial or head) near5 (detect\$6 or track\$6 or recogn\$6 or identifi\$6 or discrimin\$6 or determin\$6)) and 382.clas. and @ad<20010525	USPAT. US-PGPUB; EPO. JPO. DERWENT; IBM_TDB					
1225487 (video or stream or ((sequence or series or set or collection or array or group or progression or procession) near image))	USPAT. US-PGPUB; EPO. JPO. DERWENT; IBM_TDB					

119	((face or facial or head) near\$ (detect\$ or track\$ or recogn\$ or identifi\$ or discrimin\$ or determin\$) and 382.clas. and @ad<20010525) and ((video or stream or ((sequence or series or set or collection or array or group or progression or procession) near image))) and ((skin or flesh or human) near (color or colour or tone or chrom\$ or shade or hue or tint) same (region or section or partition or segment or part or area))	USPAT. US-PGPUB; EPO; JPO; DERWENT; IBM_TDB					
113	((face or facial or head) near\$ (detect\$ or track\$ or recogn\$ or identifi\$ or discrimin\$ or determin\$) and 382.clas. and @ad<20010525) and ((video or stream or ((sequence or series or set or collection or array or group or progression or procession) near image))) and ((skin or flesh or human) near (color or colour or tone or chrom\$ or shade or hue or tint) same (region or section or partition or segment or part or area)) and (motion or mov\$ or displac\$ or translat\$ or rotat\$ or shift or chang\$ near (position or location or orientation)))	USPAT. US-PGPUB; EPO; JPO; DERWENT; IBM_TDB					

113	((face or facial or head) near5 (detect\$6 or track\$6 or recogno\$6 or identifi\$6 or discrimi\$6 or determin\$6) and 382.clas. and @ad<20010525) and ((video or stream or ((sequence or series or set or collection or array or group or progression or proccession) near image))) and ((skin or flesh or human) near (color or colour or tone or chrom\$6 or shade or hue or tint) same (region or section or partition or segment or part or area)) and (motion or mov\$6 or displac\$5 or translat\$5 or rotat\$6 or shift or chang\$6 near (position or location or orientation)))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB					
617015	(old or previous or previously or prior) same (new or current or currently)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB					

85) (((face or facial or head) near\$5 (detect\$6 or track\$6 or recogn\$6 or identifi\$6 or discrim\$6 or determin\$6)) and 382.clas. and @ad<20010525) and ((video or stream or ((sequence or series or set or collection or array or group or progression or procession) near image))) and ((skin or flesh or human) near (color or colour or tone or chrom\$6 or shade or hue or tint) same (region or section or partition or segment or part or area)) and (motion or mov\$6 or displac\$5 or translat\$5 or rotat\$6 or shift or chang\$6 near (position or location or orientation))) ) and (overla\$4 or overlap\$4 or cover\$3 or protru\$5)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB					
--	---	--	--	--	--	--

63.((((face or facial or head) near\$5 (detect\$6 or track\$6 or recogno\$6 or identifi\$6 or discrimi\$6 or determin\$6) and 382.clas. and @ad<20010525) and ((video or stream or ((sequence or series or set or collection or array or group or progression or procession) near image))) and ((skin or flesh or human) near (color or colour or tone or chrom\$6 or shade or hue or tint) same (region or section or partition or segment or part or area)) and (motion or mov\$6 or displace\$5 or translat\$5 or rotat\$6 or shift or (chang\$6 near (position or location or orientation)))) ) and ((overla\$4 or overlap\$4 or cover\$3 or protr\$5) same (region or section or partition or segment or part or area))	USPAT. US-PGPUB. EPO. JPO. DERWENT. IBM_TDB					
--	---	--	--	--	--	--

44	((face or facial or head) near5 (detect\$6 or track\$6 or recogn\$6 or identi\$6 or discrim\$6 or determin\$6) and 382.clas. and @ad<20010525) and ((video or stream or ((sequence or series or set or collection or array or group or progression or procession) near image))) and ((skin or flesh or human) near (color or colour or tone or chrom\$6 or shade or hue or tint) same (region or section or partition or segment or part or area)) and (motion or mov\$6 or displac\$5 or translat\$5 or rotat\$6 or shift or (chang\$6 near (position or location or orientation))) ) and ((old or previous or previously or prior) same (new or current or currently))	USPAT. US-PGPUB. EPO. JPO: DERWENT. IBM_TDB					
----	--	---	--	--	--	--	--

24) (((face or facial or head) near\$5 (detect\$6 or track\$6 or recogn\$6 or identifi\$6 or discrimin\$6 or determin\$6)) and 382.clas. and @ad<20010525) and ((video or stream or ((sequence or series or set or collection or array or group or progression or procession) near image))) and ((skin or flesh or human) near (color or colour or tone or chrom\$6 or shade or hue or tint) same (region or section or partition or segment or part or area)) and (motion or mov\$6 or displac\$5 or translat\$5 or rotat\$6 or shift or chang\$6 near (position or location or orientation))) ) and ((overla\$4 or overlap\$4 or cover\$3 or protru\$5) same (region or section or partition or segment or part or area)) ) and (((face or facial or head) near\$5 (detect\$6 or track\$6 or recogn\$6 or identifi\$6 or discrimin\$6 or determin\$6)) and 382.clas. and @ad<20010525) and ((video or stream or ((sequence or series or set or collection or array or group or progression or procession) near image))) and ((skin or flesh or human) near (color or colour or tone or chrom\$6 or shade or hue or tint	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB					
2 5959541.pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB					



	10 ((US-6633655-\$ or US-5912980-\$ or US-6301370-\$ or US-6754389-\$ or US-6639998-\$ or US-6529630-\$ or US-6263113-\$).did. or (US-20030179911-\$ or US-20020159630-\$ or US-20010000025-\$).did.	USPAT; US-PGPUB					
	9 ((US-6633655-\$ or US-5912980-\$ or US-6301370-\$ or US-6754389-\$ or US-6639998-\$ or US-6529630-\$ or US-6263113-\$).did. or (US-20030179911-\$ or US-20020159630-\$ or US-20010000025-\$).did.) and ((multi\$5 or many or several or plural\$5 or number) near3 (people or face or individual or head or bod\$5))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB					
476651	((multi\$5 or many or several or plural\$5 or number) near3 (people or face or individual or head or bod\$5))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB					

63	((face or facial or head) near\$5 (detect\$6 or track\$6 or recogn\$6 or identifi\$6 or discrim\$6 or determ\$6) and 382.clas. and @ad<20010525) and ((video or stream or ((sequence or series or set or collection or array or group or progression or procession) near image))) and ((skin or flesh or human) near (color or colour or tone or chrom\$6 or shade or hue or tint) same (region or section or partition or segment or part or area)) and (motion or mov\$6 or displace\$5 or translat\$5 or rotat\$6 or shift or chang\$6 near (position or location or orientation))) ) and ((overla\$4 or overlap\$4 or cover\$3 or protr\$5) same (region or section or partition or segment or part or area))	USPAT: US-PGPUB: EPO: JPO: DERWENT: IBM_TDB					
----	---	---	--	--	--	--	--

45((((face or facial or head) near\$5 (detect\$6 or track\$6 or recogn\$6 or identifi\$6 or discrim\$6 or determin\$6)) and 382.clas. and @ad<20010525) and ((video or stream or ((sequence or series or set or collection or array or group or progression or procession) near image))) and ((skin or flesh or human) near (color or colour or tone or chrom\$6 or shade or hue or tint) same (region or section or partition or segment or part or area)) and (motion or mov\$6 or displace\$5 or translate\$5 or rotate\$6 or shift or change\$6 near (position or location or orientation))) ) and ((overla\$4 or overlap\$4 or cover\$3 or protru\$5) same (region or section or partition or segment or part or area))) and ( ((mul\$5 or many or several or plural\$5 or number) near\$3 (people or face or individual or head or bod\$5)))	USPAT: US-PGPUB: EPO: JPO: DERWENT: IBM_TDB					
--	---	--	--	--	--	--

45/(US-6301370-\$ or US-6295367-\$ or US-6263113-\$ or US-6208758-\$ or US-6188777-\$ or US-6185314-\$ or US-6173068-\$ or US-6154559-\$ or US-6141431-\$ or US-6118887-\$ or US-5940530-\$ or US-5912980-\$ or US-5740274-\$ or US-5463470-\$ or US-6754389-\$ or US-6728404-\$ or US-6707933-\$ or US-6697502-\$ or US-6665446-\$ or US-6661907-\$ or US-6639998-\$ or US-6633655-\$ or US-6611613-\$ or US-6574354-\$ or US-6571003-\$ or US-6539100-\$).did. or (US-6539099-\$ or US-6529630-\$ or US-6529617-\$ or US-6504942-\$ or US-6445810-\$ or US-6389155-\$ or US-6381346-\$ or US-6366693-\$).did. or (US-20010026633-\$ or US-20010036298-\$ or US-20020006222-\$ or US-20020012454-\$ or US-20020076100-\$ or US-20020102010-\$ or US-20020114525-\$ or US-20020136450-\$ or US-20030179911-\$ or US-20010014182-\$ or US-20010000025-\$).did.	USPAT; US-PGPUB					
---	-----------------	--	--	--	--	--

45)((US-6301370-\$ or US-6295367-\$ or US-6263113-\$ or US-6208758-\$ or US-6188777-\$ or US-6185314-\$ or US-6173068-\$ or US-6154559-\$ or US-6141431-\$ or US-6118887-\$ or US-5940530-\$ or US-5912980-\$ or US-5740274-\$ or US-5463470-\$ or US-6754389-\$ or US-6728404-\$ or US-6707933-\$ or US-6697502-\$ or US-6665446-\$ or US-6661907-\$ or US-6639998-\$ or US-6633655-\$ or US-6611613-\$ or US-6574354-\$ or US-6571003-\$ or US-6539100-\$).did. or (US-6539099-\$ or US-6529630-\$ or US-6529617-\$ or US-6504942-\$ or US-6445810-\$ or US-6389155-\$ or US-6381346-\$ or US-6366693-\$).did. or (US-20010026633-\$ or US-20010036298-\$ or US-20020006222-\$ or US-20020012454-\$ or US-20020076100-\$ or US-20020102010-\$ or US-20020114525-\$ or US-20020136450-\$ or US-20030179911-\$ or US-20010014182-\$ or US-20010000025-\$).did.) and ((mul\$5 or many or several or plural\$5 or number) near3 (people or face or individual or head or bod\$5)))	USPAT: US-PGPUB; EPO: JPO: DERWENT; IBM_TDB					
--	---	--	--	--	--	--

11((US-5912980-\$ or US-6263113-\$ or US-6529630-\$ or US-6639998-\$ or US-6754389-\$ or US-6301370-\$ or US-6633655-\$ or US-6665446-\$), did. or (US-20010000025-\$ or US-20020159630-\$ or US-20030179911-\$), did.	USPAT; US-PGPUB					
2((US-5912980-\$ or US-6263113-\$ or US-6529630-\$ or US-6639998-\$ or US-6754389-\$ or US-6301370-\$ or US-6633655-\$ or US-6665446-\$), did. or (US-20010000025-\$ or US-20020159630-\$ or US-20030179911-\$), did.) and convex\$5	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB					
2((US-5912980-\$ or US-6263113-\$ or US-6529630-\$ or US-6639998-\$ or US-6754389-\$ or US-6301370-\$ or US-6633655-\$ or US-6665446-\$), did. or (US-20010000025-\$ or US-20020159630-\$ or US-20030179911-\$), did.) and (convex\$5 or concav\$5)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB					
2 5852669 .pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB					

	12 (US-6754389-\$ or US-6665446-\$ or US-6639998-\$ or US-5912980-\$ or US-5852669-\$ or US-6529630-\$ or US-6263113-\$ or US-6301370-\$ or US-6633655-\$) did. or (US-20010000025-\$ or US-20030179911-\$ or US-20020159630-\$) did.	USPAT; US-PGPUB					
44926	4 ((US-6754389-\$ or US-6665446-\$ or US-6639998-\$ or US-5912980-\$ or US-5852669-\$ or US-6529630-\$ or US-6263113-\$ or US-6301370-\$ or US-6633655-\$) did. or (US-20010000025-\$ or US-20030179911-\$ or US-20020159630-\$) did.) and eigen\$8	USPAT; US-PGPUB, EPO; JPO; DERWENT; IBM_TDB					
	2 6542625.pn.	USPAT; US-PGPUB, EPO; JPO; DERWENT; IBM_TDB					
	12 (US-6665446-\$ or US-6754389-\$ or US-5852669-\$ or US-5912980-\$ or US-6263113-\$ or US-6529630-\$ or US-6633655-\$ or US-6639998-\$ or US-6301370-\$) did. or (US-20020159630-\$ or US-20010000025-\$ or US-20030179911-\$) did.	USPAT; US-PGPUB					
465929	12 and compact\$6	USPAT; US-PGPUB, EPO; JPO; DERWENT; IBM_TDB					

0((US-6665446-\$ or US-6754389-\$ or US-5852669-\$ or US-5912980-\$ or US-6263113-\$ or US-6529630-\$ or US-6633655-\$ or US-6639998-\$ or US-6301370-\$).did. or (US-20020159630-\$ or US-20010000025-\$ or US-20030179911-\$).did.) and compact\$6	USPAT: US-PGPUB; EPO: JPO; DERWENT; IBM_TDB					
5((US-6665446-\$ or US-6754389-\$ or US-5852669-\$ or US-5912980-\$ or US-6263113-\$ or US-6529630-\$ or US-6633655-\$ or US-6639998-\$ or US-6301370-\$).did. or (US-20020159630-\$ or US-20010000025-\$ or US-20030179911-\$).did.) and density	USPAT: US-PGPUB; EPO: JPO; DERWENT; IBM_TDB					
10((US-6665446-\$ or US-6754389-\$ or US-5852669-\$ or US-5912980-\$ or US-6263113-\$ or US-6529630-\$ or US-6633655-\$ or US-6639998-\$ or US-6301370-\$).did. or (US-20020159630-\$ or US-20010000025-\$ or US-20030179911-\$).did.) and area	USPAT: US-PGPUB; EPO: JPO; DERWENT; IBM_TDB					
3 (US-6529630-\$ or US-6542625-\$).did. or (US-20030179911-\$).did.	USPAT: US-PGPUB					
3 ((US-6529630-\$ or US-6542625-\$).did. or (US-20030179911-\$).did.) and eye\$3	USPAT: US-PGPUB; EPO: JPO; DERWENT; IBM_TDB					



## EAST SEARCH TAGGED

patent #	type	pub date	title	class1	class2	inventor			
US 20030179911 A1	US-PGPUB	20030925	FACE DETECTION IN DIGITAL IMAGES	382/118	362/173; 362/194	HO, EDWIN et al.			
US 6301370 B1	USPAT	20011009	Face recognition from video images	382/103	342/90; 348/169; 382/117; 382/118; 362/190; 362/209; 382/276	Steffens, Johannes Bernhard et al.			
US 20020159630 A1	US-PGPUB	20021031	Automated detection of pornographic images	382/165	362/218; 362/224	Buzuloiu, Vasile et al.			
US 20010000025 A1	US-PGPUB	20010315	Method and apparatus for personnel detection and tracking	382/103	362/115; 362/165	Darrell, Trevor et al.			
US 6639998 B1	USPAT	20031028	Method of detecting a specific object in an image signal	382/103	362/165; 362/190; 362/209	Lee, Jin Soo et al.			
US 6754389 B1	USPAT	20040622	Program classification using object tracking	382/224	348/169; 348/699; 362/103; 362/118; 362/156; 362/159; 362/176; 362/203	Dimitrova, Nevenka et al.			
US 6665446 B1	USPAT	20031216	Image processing apparatus and method	382/251	362/118; 362/165; 362/305	Kato, Masami			
US 6633655 B1	USPAT	20031014	Method of and apparatus for detecting a human face and observer tracking display	382/118	362/164; 362/165; 362/174; 362/206	Hong, Qi He et al.			
US 6542625 B1	USPAT	20030401	Method of detecting a specific object in an image signal	382/118	348/169; 362/165	Lee, Jin Soo et al.			
US 6529630 B1	USPAT	20030304	Method and device for extracting principal image subjects	382/190	362/118; 362/195; 362/203	Kinjo, Naoto			
US 6263113 B1	USPAT	20010717	Method for detecting a face in a digital image	382/237	362/118; 362/170; 362/224	Abdel-Mottaleb, Mohamed et al.			
US 5912980 A	USPAT	19990615	Target acquisition and tracking	382/103	348/169; 362/165	Hunke, H. Martin			

US 5852669 A	USPAT	19981222	Automatic face and facial feature location detection for low bit rate model-assisted H.261 compatible coding of video	382/118	375/240.05; 375/240.1; 375/240.2; 382/173; 382/236; 382/250; 382/251; 382/291	Eleftheriadis, Alexandros et al.				
--------------	-------	----------	---	---------	---	----------------------------------	--	--	--	--

[illegible]

[illegible]

IEEE SEARCH

\*\*\*\*\*

(face <or> facial) <sentence> (tracked <or> track <or> tracking) <and> (multiple <or> several <or> many)

(head <or> face <or> facial) <sentence> (detect <or> detection <or> segment <or> segmentation <or> track  
<or> tracking) <sentence>

(shape <or> geometry)

CITSEER SEARCH

\*\*\*\*\*

ARTICLE NAMES:

a real-time face tracker

Pfinder: Real-Time Tracking of the Human Body

Small Vision Systems: Hardware and Implementation

Moving target detection and classification from real-time video

Robust real-time face tracking and gesture recognition

Tracking of multiple faces for human-computer interfaces and virtual environments

A Computational Theory for Locating Human Faces in Photographs

Tracking human faces in real time

Skin-Color Modeling and Adaptation